

## **REMARKS**

Reconsideration of the present application in view of the above amendments and following remarks is respectfully requested.

### **Status of the Claims**

Claims 21-25, 27-38 and 42-43 are presented. No claims are amended. No claims are cancelled. New claims 42-43 are added, drawn to a method of forming a material for topical application to skin to protect from the effects of exposure to the sun. Support is found throughout the specification as filed.

No new matter has been introduced.

### **Summary of the Invention as Claimed**

The pending system claims are drawn to a foam-producing and dispensing system and to methods of forming a sun protection water-in-oil emulsion foam. Important to each of these aspects of the invention as now claimed is the use in the emulsion at least one polyol poly-12-hydroxystearate. In certain preferred embodiments, the polyol poly-12-hydroxystearate is preferably polyglycerol poly-12-hydroxystearate (see claim 23).

### **Rejections under 35 U.S.C. § 103(a)**

Previously presented claims 34-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Polovsky et al. (US 5,384,334; "Polovsky") in view of Ansmann et al. (US 6,280,712; "Ansmann"). Applicants respectfully traverse the rejection.

Polovsky discloses personal care compositions comprising alkoxylated alkyl glucoside quaternary salts that may be formulated as emulsions. Additives may include sulfosuccinates, cocamidopropyl betaine and sunscreen components. It is respectfully emphasized that Polovsky's disclosure is directed to alkoxylated alkyl glucosides having **quaternary** nitrogen-containing ether

substituents, which are **cationic** surfactants, as distinguished from alkoxylated alkyl glucosides, which are **nonionic** surfactants. Also, the disclosed salts are derived from **monomeric** alkyl glucosides, not **polyglucosides** or **oligoglucosides**. Polovsky makes no reference to poly- or oligo-glucosides. Thus Polovsky's quaternary salts possess very different physicochemical properties from those of the nonionic oligomeric alkyl polyglucosides (APGs). Thus, on the basis of the distinct chemistry of the components, Polovsky's disclosure is unrelated to that of Ansmann.

As correctly stated by the Examiner, Polovsky also does not disclose polyol poly-12-hydroxystearates or dialkyl carbonates. Also the percentage requirements of the pending claims are not disclosed. To overcome these latter deficiencies, the Examiner joined Ansmann.

Ansmann discloses a process for enhancing the effectiveness of sunscreen UV filters by solubilizing/dispersing the UV filters in dialkyl carbonates. The compositions may contain surfactants such as dialkylsulfonsuccinates and cocamidopropyl betaine. In addition, polyol esters of poly-12-hydroxystearate and alkyl **oligoglucosides** may be present. The Examiner stated that Ansmann teaches the equivalence of polyglycerol poly-12-hydroxystearates and alkyl glucosides. With respect, this is not the case. Ansmann does state that the preferred consistency factors of his compositions are fatty alcohols combined with alkyl **oligoglucosides** and/or polyglycerol poly-12-hydroxystearates (column 6, lines 13-18), but this does not equate the latter two compounds. Even if it did (which the undersigned maintains that it does not), alkyl **oligoglucosides** are still 3 steps removed from the quaternary alkoxylated alkyl glucococides of Polovsky, the 3 steps involving functionalization with a quaternary ammonium ether group, alkoxylation, and oligomerization of the glucoside.

Furthermore, Ansmann does reference "alkyl glucosides", with respect to partial esters of C6-22 fatty acids and alkyl glucosides (column 4, line 66-column 5, line 5), and again as hydrotropes, lower alkyl (C1-C8) glucosides (column 6, line 50- column 7, line 3), but these are not in regard to their use as nonionic

emulsifiers. Applicants respectfully submit, therefore, that the deficiencies of Polovsky cannot be cured by joining Ansmann.

In addition, Ansmann fails to recognize the advantage of polyol poly-12-hydroxystearates with regard to generating a **foam**, as discovered by applicants (specification, page 2, lines 4-7; new claims 42-43). Ansmann discloses suitable emulsifiers from 13 distinct classes of nonionic surfactants (col. 4, line 40 – col. 5, line 17), representing thousands of choices for his sunscreen compositions. One class comprises polyol esters, represented, for example, by polyglycerol polyricinoleate and polyglycerol poly-12-hydroxystearate (col. 4, lines 59-63). Applicants have discovered that the former produces **non-foamable** sun protection emulsions (Comparison Example, page 31, lines 28 and following), whereas the latter **uniquely produces foamable emulsions** (Examples 1-4, pages 29-13; page 2, lines 4-7). There is no teaching or suggestion in Ansmann that such a selection of a single genus of nonionic surfactants (polyol esters), let alone a single species within that genus (polyol poly-12-hydroxystearates) would be effective to provide **foamable** emulsions. A skilled artisan at the time of the invention would not be able to identify the unique foaming properties of polyol poly-12-hydroxystearates from the broad disclosure of Ansmann. Therefore the obviousness rejection should be withdrawn.

Previously presented claims 21-25 and 27-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Polovsky in view of Ansmann, further in view of Van der Heijden et al. (WO 00/78629; “Van der Heijden”). Applicants respectfully traverse the rejection.

As described above, the addition of Ansmann to Polovsky fails to cure the deficiencies of the latter. Further addition of Van der Heijden also fails to cure the stated deficiencies. Therefore the obviousness rejection should be withdrawn.

Applicants respectfully submit that the data presented in the present specification is sufficient to demonstrate the unexpected results achieved in accordance with the present invention, and therefore the patentability of the

subject matter now being claimed. Nevertheless, In the event that the Examiner continues to believe that there is insufficient evidence of unexpected results, applicants have petitioned for a 3-month suspension period within which to develop and present yet further evidence of unexpected results.

**Conclusion**

In view of the above claim amendments and remarks, applicants believe that the pending claims are in condition for allowance. The Examiner is respectfully requested to reconsider, withdraw the rejections and allow the claims.

If any additional fees are required in support of this application, authorization is granted to charge our Deposit Account No. 50-1943.

Respectfully submitted,

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/Joseph F. Posillico/  
Joseph F. Posillico  
Reg. No. 32,290  
Fox Rothschild LLP  
2000 Market Street; Tenth Floor  
Philadelphia, PA 19103-3291  
Tele: (215) 299-2000  
Fax: (215) 299-2150